Attachment 1

WILSHIRE CONSULTING

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Managing Director & Principal

December 1, 2008

Ms. Anne Stausboll
Interim Chief Investment Officer
California Public Employees' Retirement System
400 P Street, Suite 3492
Sacramento, CA 95814

Re: Revision of Currency Hedge Ratio

Dear Anne,

You requested Wilshire's opinion regarding the proposal by Staff to modify the hedge ratio to 15% of all foreign currency-denominated assets of the PERF.

Recommendation

Although we agree Staff's proposals to hedge the currency exposure in all asset classes and to calculate the impact of the hedge on performance only at the Total Fund level, we disagree with the monolithic methodology Staff has proposed to determine the correct hedge ratio(s) and recommend that a hedge ratio for each asset class and, where necessary, each investment program, be calculated separately and then aggregated to determine the overall hedge ratio.

Background

For approximately 15 years, CalPERS has had a fixed currency hedge ratio of 25% on all International (non-US) Equities. A little over a year ago, Staff was given the authority to manage that hedge ratio within the range of 20% to 30%, but Staff has since kept the ratio close to the 25% target. All currency exposures in all other asset classes have been left unhedged.

The static 16-year old currency hedge policy is beginning to show its age, and Staff has begun to investigate whether there are better methodologies to hedge CalPERS' currency exposure, and if the hedge should apply to all foreign assets rather than solely to equities.

Staff has proposed a new currency hedging methodology and hedge ratio which seeks to minimize the volatility in the performance of the Total Fund from the standpoint of a mean-variance optimization exercise. While we readily admit that this is the simplest and cleanest way of picking a hedge ratio, we believe that this approach is not the current

state of art and does not take into account the true nature of all of CalPERS' underlying positions. In addition, a simple change in the calculation used to determine the optimal hedge ratio results in wildly different results.

If Staff minimizes annual variation in returns, they have calculated that the hedge ratio should be 16%. If they use monthly returns in the same calculation, the appropriate hedge ratio is 56%. Staff then decides that the lower number is better and recommends a hedge ratio of 15%.

The tremendous difference in results from these two approaches should indicate that either may not be the best way of determining the hedge ratio. Furthermore, Staff is proposing that a 15% hedge ratio be imposed for the future based on the past returns of the CalPERS portfolio. Over the years, CalPERS' portfolio has constantly evolved in structure and types of investments and we expect that the pace of such evolution will likely accelerate in the future. Picking a hedge ratio based on minimizing return variations in the past likely will not fit the structure of CalPERS' investments in future years. As a result, Staff and the Investment Committee will need to revise the 15% hedge ratio periodically as the portfolio changes composition, but always with a backward-looking calculation.

In our opinion, a correct hedge ratio for each asset class, and potentially for each underlying portfolio, should be determined, with the help of each asset class' SIO and a comprehensive risk management and risk budgeting system, and then those hedge ratios should be aggregated to calculate the total hedge ratio for the entire PERF. In practice, this approach may also need to account for some cross-effects or offsetting positions, adding a good deal of complexity, but will better reflect the true optimal hedge for the CalPERS' portfolio and will also result in substantial cost savings or reduction in duplication of work.

For the last two years, Wilshire has encouraged the Investment Committee, the CIO, and other members of Staff to consider the implementation of a comprehensive risk measurement and risk budgeting system for all investment programs in order to allow all parties the ability to understand all investment risks in the entire portfolio and to allocate risk among investment programs in the most efficient manner. Our proposal to calculate individual hedge ratios at the asset class or investment program levels would be a part of such a comprehensive risk management approach, since unhedged currency exposure is one of the larger risks in the portfolio.

Rationale for Wilshire's Recommendation

The two main fundamental differences between Staff's proposed methodology and Wilshire's is that, first, as discussed above, Staff proposes replacing a static hedge ratio with a new static hedge ratio based solely on past performance. Second, but more importantly, Staff treats currency exposure uniformly as a risk that needs to be hedged.

Staff's methodology finds the most risk/return efficient level of hedging that the standard deviation of the returns of the portfolio and implements the corresponding hedge. Staff's method does not consider whether that currency hedge qualitatively fits with the nature of the underlying investment programs. In addition, Staff's methodology does not consider whether the current market environment or CalPERS' investment structure favors a different hedge ratio than that which is simply the most optimal for minimizing return variance.

In our opposing view, currency risk cannot be reduced to simply a factor in overall volatility, and, more importantly, *currency is not always an unintentional risk, but in many cases an intended source of return*. In many cases in the portfolio, internal or external managers have been given authority to attempt to add value to the portfolio through currency positions. The RMARS portfolio, for example, can contain currency or macroeconomic strategies that may take a position in one currency versus another, or it can invest in managers that are finding value in the arbitrage between domestic shares of a stock and ADRs/GDRs, or between various nations' interest rates. In the external non-US fixed income portfolio, managers were recently granted the authority to sell short or buy long the US dollar, to use moderate leverage, or to sell short other positions. The Fixed Income SIO can allocate money to or from these non-US managers under delegated authority at least in part on the basis of whether he thinks their non-US exposure is helpful or hurtful in the current environment. In addition, the Global Equity team is currently working on a number of potential implementations of some kind of long/short strategy which may or may not contain foreign positions or currency exposures, and which may base its positions at least in part on the outlook for currency exchange rates.

All of the above portfolios, and potentially many more within the entire CalPERS fund, are using currency as a source of return generation, not merely an incidental and resulting risk factor. In our opinion, the nature and intention of these portfolios, or any that are added in the future, need to be considered when determining the overall hedge ratio. It seems rather wasteful to us to have the RMARS team hire a US/non-US arbitrage hedge fund for a fee of 2% base and 20% of the value-added, for example, and then have a blanket program of hedging 15% of that manager's exposure automatically. Or, to have a non-US fixed income manager take a currency position as a result of extensive research, and then have that position also 15% negated by the automatic hedging policy. In both cases, CalPERS would be better off if it simply fired the external manager, moved that 15% position to an index fund, and eliminated the currency hedge.

Furthermore, Staff's proposal implies a static basket of currencies that would be hedged – in this case a basket that represents the EAFE country/currency weights. While this is a fair representation of the country/currency weights of the developed markets portion of the publicly traded non-US equity portfolio, there could be a significant mis-match between the underlying country/currency weights of the AIM portfolio, the Real Estate portfolio, the Emerging Markets portfolio, and/or the Global Fixed Income portfolio.

Calculating the appropriate hedge ratio for each asset class and then aggregating the hedge positions on a country specific basis will lead to more appropriate and efficient currency hedging – a hedging program that actually hedges the real risks in the portfolio rather than simply reducing overall fund volatility.

Lastly, it is quite possible that some underlying positions in the AIM or Real Estate portfolios (or even in other asset classes) could be undertaken at least partially on the basis of a short-term or long-term currency view. Again, an automatic currency hedge program will partially negate the work by the investment team and can reduce the potential returns to CalPERS from that position. Therefore, it is our opinion that each portfolio needs to be considered in calculating the hedge ratio, rather than being made subject to a blanket hedge.

Conclusion

In short, while we do not disagree that much of CalPERS' currency exposure presents a risk to the performance of the portfolio and should be subject to a hedge, we believe that whatever new program CalPERS develops needs to be built from the ground up, taking into account each of the underlying portfolios and investment programs, instead of simply being imposed from the top-down with no regard for the reasons behind the underlying positions throughout the CalPERS' investment portfolio. In addition, we believe that a new system should be able to constantly adapt to CalPERS' current portfolios and not simply impose a new top-down hedge that does not consider the contents of CalPERS' portfolios.

The current currency hedging program lasted for 16 years with little change, and we are interested in seeing that whatever replaces it is sufficiently sophisticated to handle CalPERS' needs for an equally long time in the future.

If you have any additional questions, please do not hesitate to contact me.

Sincerely,

Michael C. Schlachter, CFA